

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) Method for the operation of a sliding closure for metallurgical vessels, whereby the said sliding closure (10, 40) incorporates at least two opposingly tensionable fireproof closure plates (21, 22, 41, 42) which are each slideably opposingly positioned within a housing part (17, 19, 47, 49), whereby spring elements (23) are incorporated in at least one of the housing parts (17, 19, 47, 49) for the tensioning of the closure plates (21, 22, 41, 42), and whereby one closure plate (22, 42) with its housing part (19, 49) can be pushed into a closed, i.e. open position by a drive member, ~~characterised~~ characterized in that an off- and/or online diagnosis of the operating condition, especially within the area of the closure plates (21, 22, 41, 42) is carried out, during which one or more dimensions relating to the size, temperature, pressure and/or force are measured and evaluated for the sliding closure (10, 40) either directly or together with additional relevant process parameters in order to be able to judge the operational condition, and therefore also a possible continued use of the sliding closure (10, 40).
2. (Currently Amended) Method according to Claim 1, ~~characterised~~ characterized in that the distance (53) of the relevant housing parts (17, 19, 47, 49) receiving one of the closure plates (21, 22, 41, 42) from one another in the diagonal direction in relation to the plate glide surfaces is recorded as a dimension and transmitted to an evaluating means (20), whereby said distance (53) is preferably measured in several locations.
3. (Currently Amended) Method according to Claim 1 ~~or 2~~, ~~characterised~~ characterized in that the pressure of the drive member (25) as well as the stroke position of the slideable closure plate (22, 42) are recorded as a dimension to be measured and evaluated, whereby especially the friction relationships and therefore the condition of the closure plates (21, 22, 41, 42) can be judged in this way with the aid of their contacting glide surfaces (41', 42').

4. (Currently Amended) Method according to ~~one of the preceding Claims Claim 1 to 3~~, ~~characterised~~ characterized in that the temperatures near the housing parts (17, 19, 47, 49), the closure plates (21, 22, 41, 42), and/or at other locations are measured and evaluated.
5. (Currently Amended) Method according to ~~one of the preceding Claims Claim 1 to 4~~, ~~characterised~~ characterized in that the application pressure of the spring elements (23) that tension the closure plates (21, 22, 41, 42) is measured in order to determine whether one or more of the spring elements (23) is no longer functional.
6. (Currently Amended) Method according to ~~one of the preceding Claims Claim 1 to 5~~, ~~characterised~~ characterized in that the dimensions measured as actual values are compared with a target value or a target value range during the evaluation and in that a display or suchlike for the checking or the emergency closure of the sliding closure (10, 40) is activated or a continued use of the same prevented if deviations outside of the tolerance limit are found to exist.
7. (Currently Amended) Method according to Claim 6, ~~characterised~~ characterized in that the target value or the target value range of the dimensions to be measured is adjusted with the aid of the process parameters during the ~~utilisation~~ utilization period of the closure plates (21, 22, 41, 42), whereby the wear upon their glide surfaces, i.e. their flow passages and/or temperature changes are incorporated.
8. (Currently Amended) Method according to ~~one of the preceding Claims Claim 1 to 7~~, ~~characterised~~ characterized in that a protocolling and a storing of the measured dimensions of the sliding closure (10, 40), and data relating to the pan and the smelt to be poured are carried out with regard to temperature, treatment, pouring time, etc., which are defined as process parameters and incorporated during the determination of target values.

9. (Currently Amended) Sliding closure, especially for the execution of the method according to ~~one of the preceding Claims~~ Claim 1 to 8, ~~characterised~~ characterized in that for an off- and/or online diagnosis of the operating condition one or more measurement sensors or suchlike are incorporated near the housing parts (17, 19, 47, 49), the drive member (25), and/or at other locations especially within the area of the closure plates (21, 22, 41, 42), with which size, temperature, pressure and/or force can be measured and subsequently evaluated.

10. (Currently Amended) Sliding closure according to Claim 9, ~~characterised~~ characterized in, that the housing parts (47, 49) are equipped with at least one measuring sensor (50), i.e. one associated measuring element (52), with which a distance (53) of the two housing parts from one another in a diagonal direction in relation to the plate glide surfaces (41', 42') is evaluated as a dimension and each transmitted to the evaluating means (20).